## CHAPTER II

## AGRARIAN ECONOMY OF THE REGION

Settlements in a region emerge and expatiate in several related dimensions. These dimensions are mainly comprised of two components, the first is that of natural environment of the region and the second is that of the economic potential of the region in time and space. However, the settlements receive support in growth through political apparatus and societal network. These altogether in longer run contribute in the formation of the economic potentiality of the region.

The role of natural environment is vital in setting the background, to the making of the region. Nevertheless, the other factors of growth are equally significant and are also responsible for the existence of these settlements, whether rural or urban. One is often confronted with the contrast of rural and urban, though now the agreement is that these are the two points on the continuum. This continuum is more visible in case of medieval north India. The first point of the continuum flourished solely out of agrarian activities and the other due to non-agrarian activities like craft production, trade and commerce. These points on the continuum are termed as mauza (village) and shahar (town/city); between these two were located the qasbah / qasba (small towns). These qasbas had been the larger versions of the villages in the developing economy. These had incorporated part of rural environment in the form of some cultivation on their outer

S.C. Misra, 'Urban History in India: Possibilities and Perspectives', The City in Indian History, (ed.) Indu Banga, Delhi, 1994 (reprint), p. 2.

fringes and part of urban character by way of some administrative, non-agricultural production and commercial activities within the precincts. They can be understood as hybrid of the two.

Indian economy had been primarily agrarian and it was the surplus out of the agrarian sector that sustained these settlements and medieval state itself. The urban settlements both qasba and shahar in north India further continued with their existence owing to the support of the rural settlements. The villages which were the habitats of able bodied men staying in close clusters carried out primarily agrarian activities and other subsidiary works like pottery, grocery, wood-work, iron-work, spinning, weaving etc. These activities fulfilled the local consumers' needs with little exchange of goods through weekly and bi-weekly bazaars / markets. In this process a village came in contact with other villages and also with qasbas and shahrs in a micro-region. The micro-regions were similarly linked with the macro-region and other parts of the subcontinent. These altogether contributed to the expansion of the economy.

It is obvious that expansion of economy was possible either through vertical or horizontal mobility in agrarian and non-agrarian transactions at the level of extremities of the continuum bar. But the greatest impetus was provided by the *qasbas* / small towns. They played the role of catalyst and shock absorbers in the expansion of the economy of the region.

Haryana region during the study period evidenced qasba proliferation because of several reasons: climatic and topographical suitability, natural

potentialities, spirit of inhabitants to continue with the network once established and special interests of the state. However, they heavily relied for basic necessities on agricultural production. The agricultural production became the vital link in their growth and existence. This growth is evident since 13<sup>th</sup> century in limited manner and extensively since mid-fourteenth century. Reclamation of forestland, improvement in yield, change in croppattern, increase in horticultural activities etc. contributed in agricultural expansion in the region.

In this chapter, an attempt is being made to understand the importance of agricultural production in the growth of small and large towns and the process involved in rural-urban interaction. The entire discussion is based on the non-acceptance of the myth of self-sufficiency of villages as well as towns in their independent position.

It is an established fact that out of the two main sectors of economy, the medieval Indian rulers continued to rely heavily on the revenue generated by agricultural produce. For extraction of surplus generated in this sector the state introduced the *iqtadari* and *jagirdari* systems.<sup>2</sup> The importance of Haryana region was accounted for two main reasons: firstly it being in the immediate vicinity of Delhi, the most powerful political centre since the thirteenth century; secondly the region was frequented by politico-

W.H.Moreland, The Agrarian System of Moslem India, pp. 216-23 &c; Tapan Ray Chaudhari and Irfan Habib, (eds.), The Cambridge Economic History of India, I, Delhi, 1982, pp. 68-76, 241-47; I.H. Siddiqi, 'Evolution of Vilayat, the Shiqq and the Sarkars', Medieval India Quarterly, V, no.1, Aligarh, 1963; R.P. Tripathi, Some Aspects of Mughal Administration, Allahabad, 1959.

military personnels, merchants and pilgrims which worked as a catalyst throughout the study period. The account, description and statistical data that could provide information about the potential of the agrarian sector had received attention of scholars repeatedly. The chief parameters to understand the vitality of the agrarian sector are extent of cultivation, productivity of soil, crop-pattern, revenue assessment, price movement and trade in agricultural products.

At the very outset it becomes pertinent to know the extent of cultivation right from the period of our study for Haryana region. However, for the entire Sultanate period and years preceding it,<sup>3</sup> very sketchy information is available to us. It is in no way helpful in attempting estimates about the extent of cultivation or crop-pattern. Yet, on the basis of the account of Thakur Pheru, which covers part of Haryana region,<sup>4</sup> it emerges that a variety of crops were grown there during the 13<sup>th</sup> century. These included both commercial and food crops of superior and coarse varieties.<sup>5</sup> However, when we proceed to the accounts of Barani and Afif, in the context of construction of canals by Firuz Shah, it emerges that the subregion identified through Thakur Pheru's description was not so promising in its entirety. In describing the improvements and benefits expected after better availability of water through the canals, both appear to be full of hopes and expectations that sugar-cane, wheat, gram and many more crops

<sup>&</sup>lt;sup>3</sup> Dashrath Sharma, The History of Early Chauhan Dynasty, p. 333.

<sup>&</sup>lt;sup>4</sup> The region mentioned by Thakur Pheru is Delhi-Hansi -Narhad area which corresponds with the 'Haryana proper tract', parts of south Haryana (Narnaul sub - region) - as stated in Chapter-I, *ibid*, (appendix), p. 355.

<sup>&</sup>lt;sup>5</sup> *ibid.*, pp. 355-56.

will be grown in future extensively. Afif, infact, is categorical when he writes that this region could produce only *kharif* (spring harvest) for want of irrigation facilities, meaning thereby that fertility of the soil was low and water was available only during the monsoons. If this in turn, means comparatively low surplus generation then one is bound to think that what was the reason for the assignment of this area to loyal elements in the ruling elite. As an example we can take Kabir Khan-i-Ayaz al Muzzi *Hazarmardah* who remained *muqti* of Palwal from 1228-36 and similarly Nusarat-ud-din Taisi Muzzi as *muqti* of Hansi.

Barani and Afif were, in all likelihood, making their observations for expected improvements in agriculture by highlighting the contrast more to please their current ruler, Firuz Shah. For Thakur Pheru, Ibn Batutta, al-

<sup>&</sup>lt;sup>6</sup> Barani, Tarikh-i-Firuz Shahi, pp. 567-71, (tr.) Rizvi, Tughlaq Kalin Bharat, II, pp. 27-29.

<sup>&</sup>lt;sup>7</sup> Afif, Tarikh-i-Firuz Shahi,, p. 128; (tr.), Rizvi Tughlaq Kalin Bharat, II, p. 74; also see W.H. Moreland, The Agrarian System of Moslem India, Delhi, 1968, p. 60.

For details see Tabaqat-i-Nasiri, pp. 233-35, 274-76, 281-324 and (tr.) Major Raverty, pp. 628, 634, 664, 674, 681, 687-88, 693-95, 699, 703, 732, 767, 798, 807, 826-27, 831-32, 837, 850-55; also see S.B.P. Nigam, Nobility under the Sultans of Delhi, appendix, p. 194; Rizvi, Adi Turk Kalin Bharat, Aligarh, 1955 pp. 163-64. The probable answer to this querry is the region's significance was immediately realized by the Delhi rulers. The reason can be mainly political and strategic, which acquired economic shape in course of time. It is pertinent to remember that the strategic location of the region also did play a significant role. For these reasons, the rulers since Iltutmish (1210-36) started assigning the territories to their loyal officers including the royal prince. For example Kabir Khan-i-Ayaz al Muzzi Hazarmardah (of Rumi tribe) remained as muqti of Palwal (1228-36); Nasir-ud-din Aitimur Bahqi as muqti of Siwalik; Saif-ud-din Aibak as muqti of Narnaul; Malik Saif-ud-din Aibak of Kitai tribe as muqti of Sirsa (1227-28); Nusarat-ud-din Taisi Muzzi as muqti of Hansi (1227-28); Taj-ud-din Sanjar Qutlugh as muqti of Sirsa (1238); Araqali Dadbak Saif-ud-din Shamsi Azmi as muqti of Palwal (1246); Ulugh Khan-i-Balban as incharge of iqta of Rewari and Hansi. When Balban became Sultan, he had taken charge of clearing the forests in this part of Haryana region and dealt with high handedness with the Meos of the region.

Umari and others, the region produced all those crops which were cultivated during *kharif* and *rabi* season crops. Thakur Pheru's list throws light on some twenty five crops<sup>9</sup>; Barani offers the prices of few<sup>10</sup>; Ibn Batutta talks about many crops in general description but identifies Sirsa and its surroundings in particular for producing fine quality rice which could be exported elsewhere<sup>11</sup>; similarly al-Umari, the author of *Masalik al-absar fi mamalik al-amsar* enlists the prices of crops for 1330's.<sup>12</sup>

In this manner it becomes apparent that the Haryana region had developed various pockets where cultivation of crops was carried out in both the seasons. Further improvements in the produce are indicated in the accounts of Afif and Yahya bin Sirhindi, in many parts including western parts of Haryana proper tract and Bhattiana tract ever since the midfourteenth century.<sup>13</sup>

As identified in the first chapter, Haryana region had characteristics of semi-aridness and aridness mainly due to the absence of perennial rivers. Firuz Shah was perhaps the first Sultan of Delhi who decided to overcome the water shortage problem on an extensive scale. The chief apparatus was

<sup>9</sup> D. Sharma, The History of Early Chauhan Dynasty, (appendix), p. 355.

Barani, Tarikh-i-Firuz Shahi, pp. 355-56; (tr.), Fuller and Khallaque, The Reign of Alaud-din Khilji, Calcutta, 1967, pp. 100-129.

The Rehla of Ibn Batutta, (tr.), M. Hussain, p. 23 also see H.A.R. Gibb, Ibn Batutta: Travels in Asia and Africa, London, 1983, p. 193.

Masalik al-absar fi Mamalik al-amsar, (tr.), Otto Spies, p. 57; I.H. Siddiqi and Ahmad as A Fourteenth Century Arab Account, p.22.

Also see chapter I; Barani and Afif both had accounted for the aridness in this part of Haryana region. Barani, *Tarikh-i-Firuz Shahi*, p. 567 and (tr.), Rizvi, Tughlaq Kalin Bharat, II, p. 27; Afif, *Tarikh-i-Firuz Shahi*, p. 125 and (tr.), *Tughlaq Kalin Bharat*, II, p. 73.

the canal network.<sup>14</sup> Firuz Shah excavated the double canal system (Rajabwah and Ulugh Khani) with their branches and sub-branches.<sup>15</sup> These covered the large proportin of Haryana region and since then we start getting references about settlements and thereby extension in cultivation. Some of these settlements developed into qasbas and performed administrative and economic functions. Thus, we come across qasba Jind, qasba Dhatart, qasba Tughlaqpur/Safedon, shahar Hansi and Hissar-i-Firuza, while many villages, except Jhajjar<sup>16</sup> and Mandoti/Mandhauti<sup>17</sup> remained unnamed.<sup>18</sup> Apparently, some areas had substantial growth and thereby noticed the attention of the revenue department. Firuz Shah, thus, created a shiq with Hissar-i-Firuza as its headquarters and placed Hansi, Hissar-i-Firuza, Agroha, Fatahabad, Sirsa, Salura and Khizarabad and some other

For the identification of what proportion of Haryana region was watered by canal network irrigation see Afif, Tarikh-i-Firuz Shahi, pp. 128-29; (tr.), Rizvi, Tughlaq Kalin Bharat, II, pp.73-76. However, Yahya bin Sirhindi, Tarikh-i-Mubarak Shahi,, pp. 125-26 and (tr.), K.K. Basu, pp. 130-31 is more elaborative about the routes of the canals. This was probably because Yahya bin Sirhindi was the inhabitant of Sirhind and being a local resident acquired much knowledge about the geography of the region and the extent of canal network. According to him one branch extended from Sutlej to Jhajjar (qasba); the second from Sirmur hills to Hansi, Arsan and Hissar Firuza; the third from Ghaggar via Sirsuti/Sirsa fort to Harni Khera; the fourth from Yamuna to Budhai which extended till Hissar-i-Firuza and finally the fifth joining the waters of Saraswati to those of Salima. Also see K.K. Basu, 'The House of Tughlaqs', JASB, XXVI, Calcutta, 1930, pp. 254-55; R.C. Jauhari, 'A Few Canals of Medieval Punjab', Proceedings of Punjab Historical Congress, I, Patiala, 1965, pp. 82-86 and Abha Singh, 'Irrigating Haryana...', pp.49-52; Irfan Habib, The Agrarian System of Muglal India, 2<sup>nd</sup> edn., Delhi, 1999, pp. 33-37.

<sup>&</sup>lt;sup>15</sup> Afif, Tarikh -i-Firuz Shahi pp. 128-29.

<sup>&</sup>lt;sup>16</sup> Tarikh-i-Mubarak Shahi, p. 125 and (tr.) p. 130.

<sup>17</sup> ibid.

<sup>&</sup>lt;sup>18</sup> *ibid.*, p. 129 and (tr.) p. 78.

areas under the newly created shiq.<sup>19</sup> Earlier the same area was placed under Hansi which has been recorded by Afif; '... Before this time, in the days of old kings, this country had been entered in the revenue accounts as belonging to the division of Hansi'.<sup>20</sup> The person incharge of this territory was Malik Dalyan<sup>21</sup> who had taken utmost care of this part of Haryana region.

The region which was once brought under cultivation remained under plough in the post-Firuz Shah period as well.<sup>22</sup> However, it got affected adversely during Timur's invasion who ravaged the Haryana territory<sup>23</sup> and created unstability which apparently continued till the first half of sixteenth century.<sup>24</sup> The revenue figures available for Haryana region from *Baburnama* suggest that the region was ploughed.<sup>25</sup> However, further efforts to improve availability of water are not recorded. It is apparent that later rulers or their support group did not care much about the existing facilities and appear to

<sup>&</sup>lt;sup>19</sup> Afif, Tarikh-i-Firuz Shahi, p. 128 and (tr.) Rizvi, p. 74; also see W.H. Moreland, The Agrarian System of Moslem India, pp. 59-60.

<sup>20</sup> ihid

<sup>21</sup> ibid.

The Account of Haryana region at the time of invasion of Timur in the late fourteenth entury suggest that the Haryana region was a fertile tract, with settlements of varied size and rural and urban in nature. *Malfuzat-i-Timuri*, (tr.), *History of India...*, III, pp. 427-29; *Zafarnama*, (tr.), *Hisory of India...*, III, pp. 491-97 also supports the same. These settlemetrs were Hissar-i-Firuza (shahar), Sirsa (shahar), Fatahabad (shahar) Rajabpur (a fort), Tohana (a village), Kaithal (qasba), Aspandi (a fort), Tughlaqpur (a village), Panipat (shahar).

<sup>&</sup>lt;sup>23</sup> ibid., pp. 427-50; Zafarnama, pp. 86-129.

<sup>&</sup>lt;sup>24</sup> Tarikh-i-Mubarak Shahi, (tr.), pp.183-86, 213, 250-51 and (tr.) Hisory of Inda, III, pp. 491-97.

<sup>&</sup>lt;sup>25</sup> Baburnama, (tr.), p. .521.

have neglected the previous canal network.<sup>26</sup> Was it the fear of superior power's attention over the region which influenced the favourates of the Sultans to opt for their assignments in safer regions? To say anything definitely about the maintenance of these canals would be nothing more than a guess work. Later, emperor Akbar excavated the canal and got it repaired and widened first by Shihabuddin Khan<sup>27</sup> and later by Nuruddin Muhammad Tarkhan.<sup>28</sup> Barani and Afif also pointed out for the earlier period that Akbar also expected to gain from the re-excavatin of canals. His expectations are obvious from the following words: 'my desire is to reap one hundredth fold, that my crown may become wealthy and that the *zamindars* may obtain double returns'.<sup>29</sup> Akbar's interest and efforts support our understanding that rejuvenation of this territory was considered vitally important by Delhi-Agra central political authority.<sup>30</sup>

Ain-i-Akbari gives the measured area (arazi/zamin-i-paimuda) for the Haryana region. However, it is difficult to evaluate the extent of cultivation. There are sharp differences over the meaning and treatment of

Lt. Yule, 'A Canal Act of Emperor Akbar...', pp. 213-14.

Ain-i-Akbari, I, pp. 514-15; tr (I), p. 353. The canal had silted up by the time of Akbar and Shihabuddin Khan, the Governor of Delhi reparied the canal in order to extend cultivation in his jagirs and renamed it Shihab Nahar. Also see Irfan Habib, 1<sup>st</sup> edn., pp. 31-32 and 2<sup>nd</sup> edn., pp. 33-37.

Lt. Yule, 'A Canal Act of Emperor Akbar...', pp. 215-16.

<sup>&</sup>lt;sup>29</sup> *ibid.*, p. 214.

The dasturs given in the Ain-i-Akbari, I, p. 199 and (tr.) II, pp. 105-08, 114-17 show that the number of crops assessed for revenue in this region numbered fourty, a number that matches favourably with the crops grown in Ganga-Yamuna Doab.

arazi figures available in the Ain-i-Akbari.<sup>31</sup> Ain's arazi statistics have repeatedly been utilised to explore the growth of agricultural sector. The problem of reconciliation between the jama arazi figures as stated in the Ain and the average of dasturs rates for medium quality food crops, along with expected income alienated on per bigha basis to the land grantees is geninune and of vital significance.<sup>32</sup> This discussion leads to the following inferences.<sup>33</sup>

- (a) the measured area figures of Ain-i-Akbari specify the area of administrative/fiscal jurisdiction of respective divisions of suba;<sup>34</sup>
- (b) the size of uncultivable waste stood at a minimum of 47 percent of the area of a suba.
- (c) the size of cultivable waste varied between 20 to 55 percent of the measured area figure of Ain-i-Akbari.

The point raised in Trivedi's argument that average dastur rates for food crops stood around 40 dams per bigha, and not around 20,35 prompts us

W.H Moreland, Irfan Habib, Shireen Moosvi, Muzaffar Alam and Sanjay Subramaniam have all treated these to indicate cultivable fields, cultivable wastes and uncultivable waste (village habitation) nullahs, tanks, etc. W.H. Moreland, 'The Agricultural Statistics of Mughal Empire', JUPHS, 1919, II, pt.1, pp. 1-39; Irfan Habib, The Agrarian System of Mughal India, 2nd edn., pp. 5-6; Shireen Moosvi, The Economy of the Mughal Empire, p. 42. However, K.K. Trivedi disagree with them and has suggested that the arazi shows the jurisdictional area of respective administrative/fiscal divisions. See K.K. Trivedi, Agra: Economic and Political Profile, pp. 53-54.

K.K.Trivedi, 'Estimating forests, wastes and fields, c.1600', Studies in History, 14,2,n.s. 1998,pp. 301-11.

<sup>33</sup> *ibid.*,p.311

<sup>34</sup> ibid.

<sup>&</sup>lt;sup>35</sup> K.K. Trivedi, Agra: Economic and Political Profile, pp. 54-55.

to evaluate Ain's area statistics differently, than hereto done, in order to find the extent of cultivation, c.1595. Based on demarcations available in An Atlas of the Mughal Empire. Table 2.1 attempts to see the percentage of Haryana territory in Mughal subas of Agra and Delhi.

Table 2.1 Haryana Territory in the sarkars of suba Delhi and Agra

Suba	Sarkar	Map area of s <i>arkars</i> in sq. kms.	Map area of Haryana territory in sarkars in sq. kms	percentage 4:3
(1)	(2)	(3)	(4)	(5)
(A) DELHI		172,992		
	Delhi	20,622	10,836	52.54
	Rewari	3,111	2,112	67.88
	Hissar-i-Firuza	32,233	17,872	55.44
	Sirhind	30,174	8,334	27.62
	Total	(i) 86,140	39,154	45.45
(B) AGRA		120,220		
	Narnaul	. 10,684	3,084	28.86
	Tijara	1,639	1,278	77.97
	Sahar	2,582	398	15.14
	Alwar	7,192	310	4.31
•	Total	(ii) 22,097	5,070	22.94
GRAND		108,237	44,224	40.85
TOTAL				
(i+ii)				

Source: An Atlas of the Mughal Empire pp. vii-viii, and sheets 4A, 6A and 8A

From Table 2.1 we find that out of the total of 44,224 sq. kms 88.54% of Haryana territory was located in the *sarkars* of Delhi *suba* and 11.46% in

the sarkars of Agra suba. The table also shows percentage of Haryana territory in each sarkar of Delhi and Agra subas (col.5). Following from the above, we have attempted to see the relationship between the map area and Ain's arazi/ measured area figures for the sarkars in table 2.2.

Table 2.2

Relationship between Ain's measured area and map area Suba	Sarkar	Map area of Haryana territory in sq. kms.	Ain's Measured area in sq. kms.	Percentage 4:3
(1)	(2)	(3)	(4)	(5)
(A) DELHI	, , , , , , , , , , , , , , , , , , ,		\\.	(0)
	Delhi	10,836	7412.678	68.41
	Rewari	2,112	(+) 2297.395	(+)108.78
	Hissar-i-Firuza	17,872	8773.189	49.91
	Sirhind	8,334	5964.788	71.57
	Total	(i) 39,154	24,448.050	62.44
(B) AGRA				
	Narnaul	3,084	2712.946	87.97
	Tijara	1,278	1200.187	93.91
	Sahar	398	253.699	63.74
	Alwar	310	65.734	21.20
	Total	(ii) 5,070	4,232.566	83.48
GRAND TOTAL (i+ii)		44,224	28,680.616	64.85

Source:

An Atlas of the Mughal Empire, Sheets 4A, 6A and 8A; Ain-i-Akbari, I, pp. 443-44, 451-51, 518-520, 525-29 (tr.) II, pp. 197, 203-06, 293-301.

It emerges from table 2.2 that about 62% of the area of Delhi suba sarkars and approximately 83% of suba Agra's sarkars which belong to present Haryana territory was measured in c.1595. If we take both the subas

together, then the percentage of measured area was approximately 64% of the map area .

The varying degree of measurement in different territorial divisions, noticeable above, could be on account of a number of reasons. Most significant is the physiographical. Except sarkar Rewari, all the sarkars show smaller measured area in comparison to map area in respective sarkars. In case of sarkar Rewari measured area exceeds map area. Where as the rest of the sarkars can not be measured completely because of natural barriers like forests, water streams, hillocks and desert.

In case of sarkar Delhi the measured area is 68% of map area which suggests that this part of sarkar Delhi had considerable amount of settlements and it remained a prosperous tract. Sarkar Hissar-i-Firuza portrays a different picture. It shows measured area as 49% of the map area. The probable reason of less percentage of measured area lies in the existence of forest cover approximately in the central part of sarkar Hissar-i-Firuza and bangar / desert tract in its southern part. The forest covers have been recorded as imperial hunting grounds in the Mughal period chronicles. They were located in Agroha and Hissar-i-Firuza surroundings. These forests were inhabited by cheetah, which suggests thick vegetation. Therefore, the Mughal authority in c.1595 could not measure this part of Hissar-i-Firuza (see Map I). Moving down a little in the south of Hissar-i-Firuza one traces the pastures for grazing

purpose by the cattle of bagar tract of Haryana and Rajasthan provinces.<sup>36</sup> Here the land was not cultivable either due to sandy nature of the soil or low productivity. Ain does not list any pargana in this part. Besides this, the physical features of the land under sarkar Hissar-i-Firuza also mentions the existence of detached Arawalli hills in the south-west corner of present Hissar district.<sup>37</sup> Among them the highest hill was the Tosham hill (800 feet). This territory was also interspersed by sand hillocks which were scattered, from western extreme to eastern extreme of the district. However, their number decreased towards the east. We also find mention of shifting sand dunes locally called as tibba which were unfertile patches. Finally, one can infer from the observations that it was the eastern part of sarkar Hissar-i-Firuza which was conveniently measured in c.1595 and it also contained numerous settlements and almost 23 mahals of the sarkar.

In case of sarkar Sirhind the measured area stood at 71% of the map area. This territory also shows large number of settlements. This land was watered by the branches of Yamuna and Ghaggar and, therefore, this part of sarkar Sirhind remained most prosperous tract in the contemporary times.

Except Alwar other sarkars of suba Agra show relatively higher percentage of measured area out of map area. These sarkars contained settlements which were also closely located. Sarkar Tijara like Rewari sarkar was completely measured. Sarkar Narnaul shows small measured

See An Atlas of the Mughal Empire, Sheet 4A &4B.

<sup>97</sup> P.J.Fagan, Hissar District Gazatteer, Lahor

area owing to existence of detached Arawalli branches. Perhaps for the same reasons sarkar Sahar and Alwar recorded small measured area.

Based on measured area derived in table 2.2 and agreeing to a minimum of 40 dams per bigha as the average revenue rate<sup>38</sup> we can attempt to find the size of cultivated area. For this exercise we have adjusted the jama given in the Ain-i-Akbari in the same manner as the map area. The results are given in the table below, showing the proportions of uncultivable waste, cultivable waste and the cultivated area.

Table 2.3

Sarkar	Map area of Haryana territory (sq.kms.)	Uncultivable waste (sq.kms.)	Cultivable waste (sq.kms.)	Cultivable land (sq.kms.)	(5) as %age of (2)
(1)	(2)	(3)	(4)	(5)	(6)
Delhi	10,836	3,423.32	4,309.34	3,103.34	28.64
Rewari	2,112	(-) 185.40	776.13	1,521.26	72.03
Hissar-i- Firuza	17,872	9,098.81	5,978.20	2,794.99	15.64
Sirhind	8,334	2,369.21	2,112.89	3,851.90	46.22
Narnaul	3,084	371.05	1,311.61	1,401.34	45.44
Tijara	1,278	77.81	491.32	708.87	55.47
Sahar	398	144.30	198.79	54.91	13.79
Alwar	310	244.27	(-) 246.59	312.33	100.75
Total	44,224	15,954.57	15,384.97	13,748.93	31.08

Source: Table 2.1, 2.2 and appendix IIA and VB.

Statistics matching the level of information given in the Ain-i-Akbari are not available in the later sources. Chahar Gulshan, 39 an early eighteenth century source probably based on the records from the closing years of

<sup>&</sup>lt;sup>38</sup> K.K.Trivedi, Estimating forests...', Studies in History, p. 307.

Chahar Gulshan in India of Aurangzeb, tr., by J.N.Sarkar for statistical information. Also see Irfan Habib, The Agrarian System of Mughal India, pp. 3-4; K.K.Trivedi, Agra: Economic and Political Profile, p. 59.

Aurangzeb's reign, is perhaps the only source which could help in attempting comparisons on some limited scale. Due to this limitation one can only look at the expansion in measured area. However, proportionate change in the size of measured area is in no way indicative of increase / decrease in the area of cultivation by the same proportion. Relative position of measured areas based on these two sources is given in table 2.4.

Table 2.4

Comparison of measured area between c. 1600-c.1700.

Sarkar	Ain-	i-Akbari	Chahar Gulshan				
	No. of parganas	Measured area in sq. kms.	No. of parganas	Measured area in sq. kms.			
(1)	(2)	(3)	(4)	(5)	(6)		
Rewari	12	2804.5977	11	5082.9582	81		
Tijara	18	1796.8704	18	792.8316	?		
Narnaul	16	5055.6204	15	7576.1515	50		
Total	46	9657.0921	44	1338.7413			

Source:

Ain-i-Akbari, I, pp. 386-595; Chahar Gulshan, (tr.) India of Aurangzeb, p.187.

Sarkar Rewari and Narnaul show tremendous increase in the size of measured area, while in case of Tijara some transcription mistake is apparent. For other two sarkars we have seen that their territories being in Haryana region were extensively measured in c.1595. Extensive heavy forests adjoined these territories. In all likelihood the forest areas were cleared on a large scale between the period of Ain-i-Akbari and the Chahar Gulshan that provide for such an increase in these two sarkars. However, the above results can not be imposed over the entire territory as area covered

in the above table 2.4 was very small in relation to the total area of the Haryana.

Historical evidences related to the Haryana region amply shows that once the land which was brought under plough remained under cultivation, with normal rotation for regaining fertility. The canal irrigation in the region improved productivity.<sup>40</sup>

However, the neglect in the maintenance of these canals made noticeable change in the yield. We have a *Memorandum* by the people of  $chakla^{41}$  Hissar-i-Firuza where a complaint was registered regarding the stoppage of supply of water. It appears according to the writer of *Memorandum* (c.1638) that the Hissar and its surroundings were not receiving water of *Shaiku-ni*<sup>43</sup> or *Nahr-i-Faiz*<sup>44</sup> due to diversion of *Nahr-i-Bihisht* by Shah Jahan in his 11<sup>th</sup> RY as a result of construction of a new

For a discussion on significance of canal irrigation in the Haryana region see Irfan Habib, The Agrarian System of Mughal India, 2nd edn. pp. 15 &133-37; Shireen Moosvi, The Economy of the Mughal Empire, pp. 59-60.

Chakla was an administrative unit probably added since the times of Shahjahan. It was of use in land revenue collection. Theoretically more than twenty one parganas togethert in a unit were defined as chakla. Yassin's Glossary of Revenue Terms, Purnea Ms. ff. 68a & 82a; (tr.) Hasan Mahamood, An Eighteenth Century Agrarian Manual, Yassin's Dastur-i-malguzari, Delhi, 2000, term no. 169 (forthcoming). However it is not compulsory to have more than twenty one parganas even a lesser number could have formed a chakla. Some times a chakla was a bigger than a sarkar

This Memorandum dated c.1635 was issued on Chaitang. It is included in the collection of Balkrishan Brahaman. For detail see Abha Singh 'The Char Bahar of Balkrishan Brahaman: An Hitherto Unknown Source of the mid-17th Century', PIHC, 54th session, 1993.

<sup>&</sup>lt;sup>43</sup> Abha Singh, 'Irrigating Haryana...', pp. 55-56.

Sujan Rai, Khulasat-ut-Twarikh, p. 36; (tr.) M.A. Ansari, Geographical Glimpses of India, III, p. 66; Chahar Gulshan, f.47a and (tr.), India of Aurangzeb, p. 124.

channel.<sup>45</sup> It can be inferred from this *Memorandum* that the importance of the canal irrigation was acknowledged by the people of the region and in absence of supply of water they made complaints. However, no remedial measures seem to have been taken to restore flow of water for the people of Hissar and adjoining *parganas*.

II

Haryana region was gifted with both fertile pockets of arable land (comprising of Haryana proper tract and Kurukshetra tract) and varying proportion of cultivable waste. The fertility of soil is the determining factor for the selection of crops. It also determines the use of iron plough. In the absence of direct evidences we assume that producers of this region were familiar with the use of similar agricultural implements as in the adjoining territories<sup>46</sup> and that they followed similar other practices.<sup>47</sup>

The first reference about various crops grown in the region came from Thakur Pheru, c.1290. His list provides information about twenty five crops grown in Delhi-Hansi-Narhad area<sup>48</sup> and comprised of both commercial and food crops. Food crops included superior (wheat, rice) and coarse varieties (barley, *jowar*, etc.), commercial crops include sugarcane, cotton and mustard. Out of these crops inclusion of sugar cane in pre-Firuz Shah canal

<sup>&</sup>lt;sup>45</sup> Major Colvin, 'On the Restoration of Ancient Canals', pp.109-10.

<sup>&</sup>lt;sup>46</sup> Irfan Habib, The Agrarian System of Mughal India, pp. 24-5; Harbans Mukhia, Perspectives on Medieval History, Delhi, 1993, pp. 214-44 and K.K.Trivedi, Agra: Economic and Political Profile, p. 61.

<sup>&</sup>lt;sup>47</sup> Irfan Habib, The Agrarian System of Mughal India, pp.24-25.

<sup>48</sup> D.Sharma, The History of Early Chauhan Dynasty, appendix, pp. 355-56

period is revealing in the sense that this region received, comparatively speaking, difficult water supply - both natural and artificial. 49 As pointed earlier Thakur Pheru's list accounts for crops grown in the Delhi-Hansi-Narhad region only, apparently other parts of Haryana were not similarly productive. However, with the excavation of canal changes occurred and sources for the fifteenth century refer for the production of both kharif and rabi harvest. Yet, Barani and Afif or others, do not provide as exhaustive a list as Pheru. According to Barani, '...where the peasants could not think of sowing the crops, wheat and sugarcane could raise only one crop of moth and til in a year, they would now harvest both rabi and kharif crops'. 50 more informative and writes about the cultivation of moth, ganjad, 50a two varieties of sugarcane - black and ponda/paunda, nukhud (black gram), wheat, barely, etc.<sup>51</sup> A Prominent omission is indigo which appears all over Mewat tract and other parts of Haryana c.1600.52 By far the most exhaustive list of crops appear in the Ain-i-Akbari. The Ain has forty to forty five crops for different parts of the Haryana region.<sup>53</sup> It is noticeable that by the close of the sixteenth century the entire Haryana region had become comparable to other regions of north India in the production of varieties of food and commercial crops.

<sup>49</sup> ibid.

<sup>60</sup> Barani, Tarikh -i- Firuz Shahi, p. 568; (tr.), Rizvi, Tughlaq Kalin Bharat, II, pp. 28-9.

<sup>50\*</sup> ganjad can not be identified.

<sup>&</sup>lt;sup>61</sup> Afif, Tarikh-i-Firuz Shahi, p. 128; (tr.), Tughlaq Kalin Bharat, II, p. 74.

Ain-i-Akbari, (tr.) II, pp.105-17; Palsaert, The Remonstrantie, tr as Jahangir's India, p. 15.

ibid.,(tr.), II, pp. 105-07.

Thakur Pheru and the Ain both provide information about per bigha yields for various crops. However, the size of a bigha and weight of a man underwent many changes. A comparison between the two periods, therefore, is not possible. We, however, can attempt comparison by indexing the yields, with wheat as 100 and obtain the relative change that appear over the period. The indexed figures are given in the table below. We have taken the average yield from the three categories of land given in the Ain-i-Akbari, Pheru has provided only one figure for each crop.

Table 2.5

Comparison of yields of various crops in c. 1290 and c. 1595.

Produce	c.1290 <i>man/bigha</i>	c.1595 man/bigha		
(1)	(2)	(3)		
Wheat	100.00	100.00		
Barley	124.00	100.00		
Cotton	35.00	59.88		
Mung	40.00	61.08		
Urd		61.08		
Moth	53.33	43.11		
Juar	88.88	86.23		
Masur	71.11	53.29		
Seasmum	35.55	50.30		

Source: Thakur Pheru's figure for Delhi-Hansi-Narhad area in D. Sharma, The History of Early Chauhan Dynasty, (appendix), p. 355; Ain-i-Akbari, (tr.), II, pp. 69-71.

Pheru's yield belong to a period when canal irrigation was not available. For a comparison with Ain's yield we have therefore taken average of yield from unirrigated land (middling and bad). The results are

For a discussion on such changes during the Mughal period see Irfan Habib, The Agrarian System of Mughal India, pp. 353-56 &

mixed. While in case of barley, moth, juar and masur, relative value of output shows a downward slide. In case of cotton, mung and urd it is opposite. The shift is similar in extent, whether upward or downward. While appreciation in the value of cotton would possibly be because of development of weaving centres in the region. For other crops explanations are difficult to suggest.

Thakur Pheru also informs about sugarcane production and provides us the yield of the crop per bigha. There appears to be some misunderstanding about the yield per bigha. It records 10 maunds as the produce from a bigha which is extremely low. In the Dashrath Sharma's discussion it is said: 50 maunds of sugarcane juice produced about 10 maunds of jaggery. George Watt, 55 writing for Hoshiarpur in the late nineteenth century, informs that per acre produce of crop stood at amount 295 maunds. This yielded about 25 maunds of jaggery. Even though the Sultanate period bigha was much smaller, it could not have yielded such low weight of crop. Apparently, Thakur Pheru meant 10 maunds of product (i.e. jaggery) from the crop obtained from a bigha of land. Even this yield raises doubts, 10 maunds of jaggery from 50 maunds of sugarcane is much higher than the estimates given by George Watt, i.e., 295 maunds of crop produced from 25\% maunds, or 0.09 maunds jaggery from one maund of crop, c.1900, compared to 0.2 jaggery in Thakur Pheru's estimate.

<sup>&</sup>lt;sup>55</sup> George Watt, Dictionary of Economic Products of India, VI, Calcutta, 1889-93, p. 302.

Sugarcane, like cotton, is recorded in Mughal documents as jins-i-kamil or jins-i-ala (high grade crops, grown for the market)<sup>56</sup> and its cultivation appears to be quite extensive. The contemporary sources<sup>57</sup> show copiousness of sugarcane cultivation in the Haryana proper tract at Maham/Mahim near Rohtak. However, Ain-i-Akbari is silent in terms of yield regarding sugarcane cultivation, only two varieties of sugarcane paunda/ponda and common are mentioned.<sup>58</sup>

Limited information about prices of some agricultural produce is also available. Due to unmeasureable change in the value of money, we have compared these by following the method of indexing. I have taken the prices of wheat at 100.

Table 2.6

Comparision of prices of agricultural products

Agricultural Produce (1)	c.1310 (2)	c.1595-96 (3)
Wheat	100.00	100.00
Barley	53.33	66.67
Rice	66.67	124.50
Mash	66.67	150.00
Gram	66.67	66.67
Moth	40.00	100.00
High Grade Sugar	1,333.33	2000.00
White Sugar	800.00	1,066.67

Sources: Barani, Tarikh-i-Firuz Shahi pp. 304-05; Ain-i-Akbari, (tr.) I, pp.65-67.

Irfan Habib, The Agrarian System of Mughal India, 2nd edn., p. 43.

<sup>&</sup>lt;sup>67</sup> Ain-i-Akbari, I,p. 527; The English Factories in India, 1637-41,p. 134.

<sup>&</sup>lt;sup>58</sup> *ibid.*,pp. 76-77, (tr.),II,p. 85.

The relative value of food crops, more or less, remained same. A marginal rise in the value of rice could possibly be due to difference in strains. Price of sugar product also may have been increased on account of difference in their varieties between c.1400 and c.1600.

When Akbar adopted zabti system of revenue assessment, he categorized land into polaj, paruti, chachhar and banzar, depending upon the productivity of land whether irrigated or non-irrigated.<sup>58</sup> We are fortunate to have the dastur rates of various spring and autumn harvest for Table 2.7 gives dastur rates in relation to wheat Harvana region. (index=100). Some 21 crops have been taken into account for the following administrative units: Tijara, Narnaul, Sahar, Alwar, Sub-urban district, Jhajjar, Palwal, Rohtak, Gohana, Sirsa, Mahim/Maham, Rewari, Taoru, Sohana, Indri and Thanesar. Most of the crops were cultivated in different dastur areas of the suba of Agra and Delhi. Wheat, sugarcane and indigo required expensive inputs, whereas crops like barley, jowar, rice, etc. could be raised on less fertile soil and required less labour. The dastur rates of Indian vetches, barley, adas, mustard seeds, peas, kur rice, common rice, mash, moth, lobiya, jowari etc. were lower in comparison to wheat, sugarcane, cotton, indigo etc. The last three being the commercial crops had high dastur rates in comparison to wheat, say for sugarcane ponda/paunda variety it was more than 300 percent. Sugarcane was used for production of jaggery and sugar. In the absence of evidence, one can not be sure if it was transported to other parts of north India. Similarly indigo crop which was

<sup>&</sup>lt;sup>68</sup> Ain-i-Akbari ,(tr.), II, pp. 68-90.

**TABLE 2.7** 

Commodities	Prices F	Prevalent in	Suba c. 1595 for ritory	Haryana					Price	es Prevalent	Delhi Sub in c. 1595 fo		Cerritory				
	Tijara	Narnaul	Sahar	Alwar	Sub- Urban Dist.	Panipat	Jhajjar	Palwal	Rohtak	Gohana	Sirsa	Mahim	Rewari	Taoni	Sohana	Indri	Thanesar
		2	3	4	5	6	7	8	9	10	11_	12	13	14	15	16	17
SPRING HARVEST																	
Wheat	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100,00	100.00	100.00	100.00	100.00
Indian Vetches	56:42	58.27	53.91	60.41	57.61	62.03	54.22	51.61	49.93	51.56	52.22	66.42	55.78	48.62	123.44	70.88	52.57
Barley	65.59	67.42	62.67	65.44	66.85	69.52	68.55	65.59	58.51	73.37	72.12	72.12	38.20	34.47	70.59	51.06	52.47
Adas	40.81	38.85	39.00	39.00	38.33	41.35	39.51	40.64	41.28	52.09	41.36	41.28	38.20	40.85		49.26	18.87
Mustard Seeds	49.52	60.33	47.32	49.32	46.34	50.00	51.07	48.59	51.71	50.87	50.00	52.22	49.44	48.62		41.49	42.30
Peas	49.52	43.81	47.32	47.78	46.34	44.83	42.88	48.59	44.58	52.09	51.19	44.88	46.27	45.51	91.20	39.30	37.09
Onion	126.39	135.34	120.77	122.77	128.82	134.76	127.12	126.39	136.96	148.08	145.54	138.97	126.49	126.49		171.59	138.11
Kur Rice	78.14	74.33	79.12	76.06	84.39	91.04	99.64	78.13	79.17	78.76	79.17	79.17	33.45	82.87		81.98	82.63
Ajvain	126.39	135.34	120,77	125.35	133.71	152.60	137.82	126.39	145.54	148.08	144.24	145.54		126.49		164.82	141.57
Autumn Harvest																	
Sugarcane (Ponda)	347.53	347.90	322.19	305.06	334.12	339.60	409.32	340.28	371.57	373.71	366.78	371.57	348.42	347.74	637.24	469.18	403.56
Sugarcane Common	289.05	216.25	206.25	200.00	201.76	210.61	205.49	215.09	217.79	223.34	217.87	217.87	217.29	195.76	392.16	231.12	202.00
Dark Coloured rice	121.51	124.86	113.24	120.74	124.92	114.72	120.74	118.51	106.35	110.06	91.07	130.30	120.60	121.10			
Common Rice	98.39	97.98	86.30	94.12	88.41	75.65	86.99	90.54	84.76		77.41	82.53	100.12	98.47	170.71	82.41	70.89
Mash	54.82	61.14	53.91	53.42	55.87	56.74	54.23	48.63	65.06	61.32	71.16	71.16	55.78	54.86	105.90	62.90	55.46
Cotton	138.77	143.37	141.36	132.60	141.44	156.11	145.79	148.63	152.75	155.24	152.58	152.60	141.22	138.88	277.98	209.50	252.43
Moth	35.66	36.84	35.93	34.08	36.69	44.88	37.84	37.54	39.58	40.27	39.58	39.58	34.86	35.69	70.59	42.27	38.48
Indigo	250.77	251.00	242.55	239.58	192.06	207.19	197.97	188.44	205.56	217.97	214.24	267.12	247.70	250.93	476.46	315.00	270.58
Hina	121.47	123.08	117.11	117.11	122.85	130.30	127.66	121.58	134.07	132.40	130.13	130.13	120.44	121.10	228.58	137.17	117.83
Henp	133.29	143.44	132.14		133.71	152.70	137.82	126.54	137.29	139.68	149.05	147.56	141.22	138.40		106.67	138.01
Lobiya	47.50	56.62	49.31	40.53	49.20		42.88	51.61	53.42	59.52	71.16	71.16	55.78	47.53	96.87		
Jowar	54.82	56.62	52.38	52.38	52,60	56.74	54.22	40.80	60.27	66.20	71.16	59.93	55.78	54.86	105.90	64.84	55.74

Source: Ain-i-Akbari I, (tr.), pp. 105-108 and 114-117

used for the manufacture of blue dye<sup>59</sup> is reported to have been cultivated in Mewat tract. According to Ain's dastur – rate for indigo, it was 200 times than that of wheat. Pelsasert, a Dutch traveler who visited India in the third decade of seventeenth century, reported about Mewat tract and cultivation of indigo in many villages.<sup>60</sup> He also accounted for the annual yield which was 1000 bales or more. However, the quality of indigo produced in Mewat tract was inferior to that of the Bayana which was the best in the seventeenth century. Even the indigo of Kol, Khurja and other places was relatively better. The inferior quality produced in Mewat tract was perhaps due to sandy soil in the sub-region. For this reason, it was not sold well in distant places and was rather used locally and distributed to the places where it was not cultivated.<sup>61</sup> Pelsaert has provided the estimates of annual yield of the dye for three major indigo tracts, which are located in the surroundings of Haryana region. The details of the yield are as follows:<sup>62</sup>

For details on indigo cultivation, manufacture of dye, price movement export etc. see Irfan Habib, The Agrarian System of Mughal India, 2nd edn.,pp. 47-49; Iqtidar Alam Khan, 'Pre-Modern Indigo Vat of Bayana', Journal of Islamic Environmental Design, Rome, 1989; K.K. Trivedi, 'Innovation and Change in Indigo Production in Bayana, Eastern Rajasthan', Studies in History, 10, 1, 1994; 'Indigo in the Bayana Region in the 17th Century', Centre for Historical Studies, School of Social Sciences, JNU, New Delhi, 1989, pp. 1-28 and 'Comparative System of Indigo Production in pre-British India', paper presented at 2nd International Symposia on Wood, Indigo and other Natural Drugs: Past, Present and Future, Tolouse, (France), June, 1995.

<sup>&</sup>lt;sup>60</sup> Pelsaert, The Remonstrantie, (tr) as Jahangir's India, p. 15.

<sup>61</sup> ibid.

<sup>62</sup> *ibid.*, pp. 13-15.

A. Bayana Tract

(i) Favourable years 4000 bales
(ii) Unfavourable years 2000 bales
A. Kol-Khurja 1000 bales
B. Mewat 1000 bales

The weight of one bale was 4 maunds (man-i-Akbari) and one man-i-Akbari was 55.32 lb. avdp., therefore, for Mewat tract the cultivation would have been 221280 lb avdp. or 100.4 metric tons. The production figure is a fair indication of extensive cultivation of indigo in the Mewat tract.

Cotton cultivation was also distributed all over the region. Table 2.7 indicates the revenue rates for cotton that ranged between 130 times to 150 times of wheat for Tijara, Narnaul, Sahar, Alwar, Sub-urban district, Panipat, Jhajjar, Rohtak, Gohana, Sirsa, Mahin, Rewari and Taoru. These rates were lower to the rates at Sohana, Indri and Thanesar that ranged between 200 to 270 times of wheat. By all these figures we may summarise that cotton growing was wide spread in the first category of dasturs. The cotton, which was produced in the region was locally consumed and weaving centres emerged within the region. Panipat was one such prominent centre. 63

Revenue estimates for pre-Mughal period are not available. Only  $Baburnama^{64}$  provides some information reproduced below.

<sup>63</sup> EFI, 1637-41,p. 135.

<sup>64</sup> Baburnama, (tr.), p. 521

Revenue figures from Baburnama for Haryana Region

		•		
Sarkars	Tankas	Dams		
Sirhind	1,29,31,985	25,863,970		
Hissar-i-Firuza	1,30,75,174	26,150,348		
Delhi and Mian Doab <sup>64</sup>	3,69,50,254	73,900,508		
Mewat	1,69, 81,000	33,962,000		
Total	7,99,38,413	159,876,826		

Source: Baburnama, (tr.), p. 521; 1 tanka = 2 dam

However, above details can not be compared with these from the Ain as we do not know what territories/ areas constituted any of the sarkars mentioned in the Baburnama.

Even Ain's figures, relating to jama (based on appendix V B), taken by themselves do not offer any noticeable trend from those for other regions of the Mughal Empire,c.1600. In absolute figures the jama from the Haryana territory was 230,687,615 dams. However, the ratio between jama and arazi stood at 19.32 dams per bigha, a range close to a relationship noticed for other subas of the north.<sup>65</sup>

Out of the estimated revenue of 230,687,615 dams 6,027,317 dams was gifted away as mada-i-maash grant, and is entered in the Ain-i-Akbari as suyurghal. This amounted to 6.58 percent of the jama of this territory.

Mian Doab stands for the area covered by the Ganga- Yamuna Doab.

Shireen Moosvi, The Economy of the Mughal Empire, p. 187.

If one agrees that 50 percent of the balance was out of the assessed land<sup>66</sup> and the balance from the cultivable land, and unassessed land, then the total value of alienated revenue would be double of the stated *suyurghal* figures.<sup>67</sup> In case of Haryana it would come to 13.16 percent.

Our discussion suggests that Haryana territory was considered vital/indispensable by the Delhi rulers. Sultanate period witnessed steps for improving agricultural production, for agriculture was the main source of income to the state. The positive results were apparent even during the Sultanate rule. These are attested by the statistics of the Ain-i-Akbari where Haryana's estimate follow the same trend as those of other Indian territories.

<sup>66</sup> Ain-i-Akbari, I, p. 199; (tr.), I, p. 280.

<sup>&</sup>lt;sup>67</sup> K.K.Trivedi, Agra: Economic and Political Profile, p. 97.